

Texas Commission on Environmental Quality

CHECKLIST WORKSHEET

IHW RCRA PERMITTED FACILITY CME CHECKLIST 7 SECTION A

Reg Ent Name : _____

Date : _____

Add ID _____

Investigator Name _____

Item No.	Description	Answer	Citations	Notes
	SECTION A: SAMPLING PROCEDURES FOR PERMITTED STATUS FACILITY [Guidance Documents: SW-846; RCRA Ground-water Draft Technical Guidance]			
1	Has the facility developed a Sampling & Analysis Plan (SAP)?		335.163(4)(A) 335.163(4)(B) 335.163(4)(C) 335.163(4)(D) 335.163(4) 264.97(d) 264.97(d)(1) 264.97(d)(2) 264.97(d)(3) 264.97(d)(4)	
1A	Is a SAP maintained at the facility?		335.163(4) 264.97(d)	
1AI	Specify date of SAP evaluated during this investigation:			
1B	Does the SAP address the following items:			
1BI	Sample collection procedures?		335.163(4) 264.97(d)(1)	
1BII	Sample preservation & shipment?		335.163(4) 264.97(d)(2)	
1BIII	Analytical procedures?		335.163(4) 264.97(d)(3)	
1BIV	Chain of Custody procedures?		335.163(4) 264.97(d)(4)	
1C	Is the Company following the requirements of the SAP?			
2	Has the facility developed methods of Measurement of Water Depths?		335.163(1)(A)(ii) 335.163(1)(B) 335.163(1)(C) 335.163(1) 335.163(1)(A) 264.97(a)	
2A	Are measurements of depth to standing water in the well obtained prior to well evacuation?			

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2B	Are measurements taken to the nearest 0.01 foot?			
2C	What device is used?			
2D	Is the monitoring equipment properly cleaned between well locations to prevent cross-contamination?			
3	Has the facility developed methods of measurement of total depth of well:		335.163(1)(A)(ii) 335.163(1)(B) 335.163(1)(C) 335.163(1) 335.163(1)(A) 264.97(a) 264.97(a)(1) 264.97(c)	
3A	Are measurements of the depth to the bottom of the well obtained?			
3B	How frequently are the measurements made?			
3C	What device is used?			
3D	If total depth of well is found to be decreasing, what action is taken by the facility?			
4	Has the facility developed methods of measurement & sampling of immiscible layers?		335.163(1)(A)(ii) 335.163(1)(A) 264.97(a)	
4A	Are procedures used which will detect light phase immiscible layers?			
4B	Are procedures used which will detect heavy immiscible layers?			
4C	Are the detected immiscible layers sampled separately prior to well evacuation?			
4D	Do the procedures used minimize mixing with water soluble phases?			
5	Are wells evacuated before sampling?		335.163(1)(A)(ii) 335.163(3) 335.163(1)(A) 264.97(a) 264.97(c)	
5A	Are wells evacuated to dryness or evacuated so that at least three casing volumes are removed?			
5B	How is well volume to be evacuated calculated?			
5C	How is evacuated water measured?			
5D	What device is used to evacuate the wells?			
5E	How is evacuated water disposed?			
5F	Is dedicated evacuation equipment used?			
5G	Is care taken to avoid placing clean evacuation equipment on the ground or other contaminated surfaces prior to insertion into the well?			
6	Are wells allowed to stabilize before sample withdrawal?		335.163(4)(A)	

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			335.163(4)(B) 335.163(4)(C) 335.163(4)(D) 335.163(4) 264.97(d) 264.97(d)(1) 264.97(d)(2) 264.97(d)(3) 264.97(d)(4)	
6A	How long does the operator allow the well to recover before sampling is conducted?			
6B	Are samples for volatiles and semi-volatiles obtained first, after the well recovers?		335.163(4) 264.97(d)(1)	
6C	What sampling device is used?			
6D	Is the sampling device a non-dedicated sampling equipment?			
6DI	If non-dedicated sampling equipment is used, is equipment disassembled and thoroughly cleaned between samples?			
6DII	How is the device decontaminated?			
6DIII	Are equipment blanks taken to ensure that sample cross-contamination has not occurred?		335.163(4) 264.97(d)(1)	
6E	Are volatile samples taken with a positive gas displacement bladder pump, pumping at rates below 100 ml/min?		335.163(4) 264.97(d)(1)	
6F	Are bailers used for sample collection?			
6FI	Are they lowered slowly to prevent de-gassing of the water?		335.163(4) 264.97(d)(1)	
6FII	Are the contents transferred to the sample container in a way that will minimize agitation and aeration?		335.163(4) 264.97(d)(1)	
7	Are field analyses conducted to measure chemically unstable parameters?		335.163(4)(A) 335.163(4)(B) 335.163(4)(C) 335.163(4)(D) 335.163(4) 264.97(d)	
7A	Does the field analysis for chemically unstable parameters include the following:			
7AI	pH?			
7AII	Temperature?			
7AIII	Specific conductivity?			
7AIV	Other?			
7B	Are in-situ determinations made BEFORE or AFTER well purging?			
7C	Are in-situ determinations made BEFORE or AFTER well sampling?			

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7D	Is measuring equipment calibrated according to manufacturers' specifications and consistent with SW-846?		335.163(4) 264.97(d)(1)	
7E	Is the equipment calibration date, procedure, and maintenance documented in the field logbook?			
8	Are appropriate sample containers used?		335.163(4)(A) 335.163(4)(B) 335.163(4)(C) 335.163(4)(D) 335.163(4) 264.97(d) 264.97(d)(1) 264.97(d)(2) 264.97(d)(3) 264.97(d)(4)	
8A	Are samples transferred from the sampling device directly to their containers?			
8B	Are sample containers for metals analysis polyethylene with polypropylene caps?		335.163(4) 264.97(d)(1)	
8C	If glass bottles are used for metals samples, are the caps Teflon-lined?		335.163(4) 264.97(d)(1)	
8D	How are the sample containers for metals analysis cleaned?			
8E	Are sample containers for organics analysis glass bottles with Teflon-lined caps?		335.163(4) 264.97(d)(1)	
8F	How are sample containers for organics analysis cleaned?			
8G	Is a trip blank prepared and analyzed for samples being analyzed for volatile organics?		335.163(4) 264.97(d)(1)	
9	Are appropriate sample preservation procedures followed?		335.163(4)(A) 335.163(4)(B) 335.163(4)(C) 335.163(4)(D) 335.163(4) 264.97(d) 264.97(d)(1) 264.97(d)(2) 264.97(d)(3) 264.97(d)(4)	
9A	Are all samples refrigerated or cooled immediately after sampling?		335.163(4) 264.97(d)(1)	
9B	Are samples for metals/radioactivity analysis acidified to pH <2 with HNO ₃ ?		335.163(4) 264.97(d)(1)	
9C	Are samples for the following analyses acidified to pH <2 with H ₂ SO ₄ : total phenolics; oil and grease; nitrate/nitrite; other?			

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9D	Is the sample for TOC analysis acidified to pH <2 with HCl or H2SO4?		335.163(4) 264.97(d)(1)	
9E	Is the sample for TOX analysis preserved with 1 ml of 1.1 M sodium sulfite?		335.163(4) 264.97(d)(1)	
9F	Is the sample for cyanide analysis preserved with NaOH to pH >12?		335.163(4) 264.97(d)(1)	
9G	Are samples preserved in the field at the time of sampling?		335.163(4) 264.97(d)(1)	
9H	What other procedures are used?			
10	Are special handling considerations required for the sampling?			
10A	Are organic samples handled without filtration?		335.163(4) 264.97(d)(1)	
10B	Are samples for volatile organics analysis collected such that all headspace over the sample is eliminated?		335.163(4) 264.97(d)(1)	
10C	Are samples analyzed for dissolved metals?			
10CI	Are they filtered prior to preservation in the field with HNO3 to pH<2?		335.163(4) 264.97(d)(2)	
10CII	Are they not preserved in the field and filtered in the lab?		335.163(4) 264.97(d)(2)	
10CIII	If the sample is to be analyzed for total metals, is it unfiltered and preserved with HNO3 to pH<2?		335.163(4) 264.97(d)(2)	

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